## REMARKS

Applicants have amended the claims in order to more particularly define the invention taking into consideration the outstanding Official Action.

In particular, claims 1 and 23 have been amended to positively recite:

- embedding of the schedule information in the beacon frame without transmitting an additional schedule information frame,
- that the beacon frame is compatible with the 802.11 standard,
- that the schedule information is embedded in a schedule information field, and
- that the plural sets of association identification and time slot information are in respective subfields.

In addition, claims 1 and 23 have been amended to overcome the objection set forth on page 5 of the Official Action requiring that "data" at the end of claims 1 and 23 be changed to --the data--.

Support for these additions is as follows:

- Embedded Schedule Information: page 5, lines 10-12; page 12, lines 17-18, etc.
- 802.11 standard: page 4, line 24 to page 5, line 4 and page 11, lines 19-20

- Schedule Information Field: Page 5, lines 10-12; Fig. 5 and page 12, lines 21-22;
- Association Identification Sub-Fields: Page 5, lines 10-12; Fig. 5 and page 12, line 23;
- Time Slot Information Sub-Fields: Page 5, lines 10-12; Fig. 5 and page 12, line 24.

Because these additions are all supported by the original specification, it is respectfully submitted that the amendments do not introduce new matter into the application.

Reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

## I Response to Rejections Under 35 U.S.C. § 102

The rejection of claims 1-14 and 23-36 is under 35 U.S.C. § 102(e) as being anticipated by Liu et al. (U.S. 2004/0190467 A1), hereinafter referred to as Liu, is respectfully traversed on the grounds that the Liu patent fails to disclose or suggest

- embedding a schedule information field including time slot information field and association ID subfield sets in a Beacon frame and periodically entering an active state to receive the Beacon frame, as recited in claims 1 and 23, and

- having the point coordinator transmit the schedule information *after* transmitting the beacon frame, and periodically entering the active state to receive the beacon and schedule frames in a distributed-manner mode network, as recited in claims 8 and 30,

thereby eliminating the need to separately transmit schedule information and resulting in a simpler implementation that requires less power than the system of Liu.

With regard to claims 1-7 and 23-29, the applicants have respectfully pointed out that, in the Liu patent, a schedule information vector SIV frame is used as a power saving mechanism (paragraph 0041), which is not defined in the 802.11 protocol. The SIV frame is transmitted to the stations within a TIM frame of a beacon (claim 12). In contrast, in the claimed invention, the schedule information is embedded in a field in the Beacon frame rather than being provided in a new frame. Accordingly, in terms of the protocol structure, the invention is different from the cited reference.

From the description, it is clear that the invention provides a method and system for power saving in a wireless LAN, which uses the method of modifying the beacon frame body. The medium access behavior of each station during the contention free period (CFP) and the contention period (CP) can be dynamically re-programmed. Therefore, the stations that should access the radio medium can only wake up at the specific access time based on the time slot information sub-field

of the schedule information field to send or receive the packet, and re-enters its power-saving state after the data transmission.

In the Liu patent, the schedule information vector SIV frame is transmitted to the stations within a TIM frame of a beacon, which will increase the length of the TIM. For an SAT, the system of Liu needs to listen to all the information of the TIM to determine whether there is a SIV frame for itself. The interval of the STA staying in the active mode will be increased so as to increase the power consumption of the SAT. This is a problem since, as pointed out in the description of related art section of the present application, it is known that the mechanism of TIM in the IEEE 802.11 standard cannot effectively save power during the active period. The known method of using an SIV frame is based on the structure of TIM frame, and as a result cannot avoid the limitations of the TIM structure. Moreover, Liu needs to allocate bandwidth for the SIV frame that is not only un-compatible with the 802.11 standard, but also reduces the bandwidth efficiency. By eliminating the SIV frame, the invention requires a simpler implementation in comparison with that of Liu and has a practical advantage due to the power saving.

As a result of these differences, it is respectfully submitted that the Liu patent does not anticipate the invention as presently claimed, and withdrawal of the rejection of claims 1-14 and 23-36 is respectfully requested.

## II Response to Rejections Under 35 U.S.C. § 103

This rejection is respectfully traversed on the grounds that the Yildiz patent, like the Liu patent, whether considered individually or in any reasonable combination, fails to disclose or suggest providing a system for power-saving in a wireless local area network, as claimed, so that a control station transmits the schedule information field embedded in the beacon. The schedule information field includes plural sets of association identification sub-field and time slot information sub-field. The association identification sub-field indicates that there is a corresponding first station to access the radio media. The time slot information sub-field specifies the time that the corresponding first station is in active state for accessing the radio media. A first station enters its active state to access the radio media in the time specified by the time slot information sub-field in the schedule information field when there is an association identification sub-field indicates that there is a corresponding first station to access the radio media. The invention uses schedule information field which runs compatible with the CSMA/CA protocol.

As such, not only is the method of the invention different from those of the cited references, but the protocol structure of the invention is also different from those of the cited references. Withdrawal of the rejection of claim 37 under 35 USC § 103(a) is accordingly requested.

## CONCLUSION

In view of the foregoing remarks, reconsideration and allowance of the application are now believed to be in order, and such action is hereby solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,
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